
Title: Scaling tower flux and satellite measures of ecosystem function across biomes, seasons and extreme dry to wet years in Australia

Project Description: This project focuses on scaling in-situ field and tower flux measurements of ecosystem processes and physiology to regional scales with the use of satellite time series data sets involving Landsat and MODIS/VIIRS sensors.

Funding: AusCover-TERN

Title: Impacts of extreme hydro-meteorological conditions on ecosystem functioning and productivity patterns across Australia

Project Description: This project aims to analyse cross-biome and site-level functional responses across contrasting hydroclimatic periods to better understand climate change impacts on ecosystem productivity, resilience, and potential collapse.

Funding: ARC Discovery

Supervisor: Professor Alfredo Huete

Desirable skills and qualifications: Relevant prior course degree in either ecology or remote sensing. Some knowledge of image analysis, data processing, or programming

Title: Vegetation bio-optical and fluorescence relationships with leaf chemistry, stress, and phenology

Supervisors: Professor Alfredo Huete and Dr Natalia Restrepo-Coupe

Project Description: In this project we investigate the relationships of vegetation photosynthesis, stress and productivity using combined spectral and fluorescence measures of vegetation leaves, canopies, and landscapes. At the landscape level, we will investigate new space measurements of sun-induced chlorophyll fluorescence (SIF) combined with standard vegetation indices, and in-situ phenocams to assess drought stress and phenology patterns across Australian landscapes.

Desirable skills and qualifications: Relevant prior course degree in either ecology or remote sensing. Some knowledge of image analysis, data processing, or programming

Funding: AusCover-TERN

Contact: Professor Alfredo Huete (Alfredo.Huete@uts.edu.au) for more information